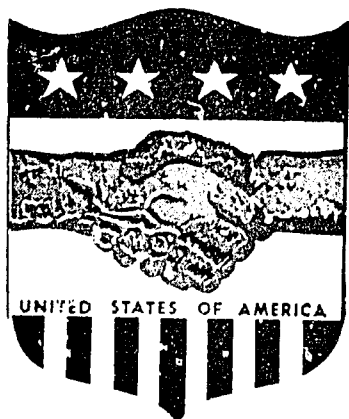


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Semiannual Report



TURKISH University Program

Referred to Under
From 1966 NS

Nebraska in Turkey

July 1, 1966 - Dec. 31, 1966

COVER PAGE

The cover of this report was designed by Clifford Hollestelle, Visual Aids Specialist for the Department of Information of the University of Nebraska. It depicts the cooperative effort of Ataturk University, the University of Nebraska and the Agency for International Development in establishing a modern university in Eastern Turkey that will contribute to the progress of Turkey. The figure on the right is taken from a relief of Kemal Ataturk which is displayed at Ataturk University and often used as a symbol of the University.

* * *

UNIVERSITY OF NEBRASKA - AID CONTRACT PROGRAM

In accordance with provisions of Contract No. AID/nesa-188
Appendix A - Article IV, we submit herewith the progress report covering
the period July 1, 1966 to December 31, 1966.

A. C. Breckenridge, Vice-Chancellor
International Programs

Jason S. Webster, Coordinator
Uni. Nebraska Turkish Program

E. F. Frolik, Dean
College of Agriculture and Home
Economics

Entered into Contract	March 28, 1955	
Amendments	May 3, 1955	July 3, 1956
	June 29, 1955	September 22, 1956
	August 5, 1955	January 5, 1957
	September 19, 1955	November 22, 1957
	March 16, 1956	
Superseded by New Contract	May 19, 1958	
Amendments	June, 1959	May, 1962
	September, 1959	August, 1963
	June, 1960	June, 1964
Superseded by New Contract	July 1, 1965	

SCOPE: Render technical advice and assistance to Turkey for the purpose
of improving the economic development and general welfare of
Turkey by assistance to its Ataturk University.

Conditions Governing Operations: Services provided in Turkey are an
integral part of the United States AID and will be performed under
the general policy guidance of the USAID Director; the University of
Nebraska will be responsible for all professional and technical
details of the contract and shall keep the USAID Director currently
informed of the progress of the project.



Professor Ernest J. Wheeler
(1901 - 1966)

Professor Ernest J. Wheeler, 65, died in East Lansing, Michigan on September 11, 1966 where he and his wife, Mary C. Wheeler, had retired after returning from Turkey in March, 1964.

The following appropriate tribute was paid to Professor Wheeler upon leaving Ataturk University by his co-worker, Docent Dr. Fahrettin Tosun:

"Governor of Erzurum, Military Commander of Third Army,
Rector of Ataturk University, Guest, and Friends"

On behalf of the members of Plant Science Department, I want to thank all of you who come to this modest reception to honor Professor Ernest J. Wheeler and Mrs. Wheeler.

We, the members of Plant Science Department, feel very sorry that Professor and Mrs. Wheeler are leaving us in the near future. We sincerely wish they could stay with us longer. Because we still need the guidance of Professor Wheeler in our work. But we know that because of Mrs. Wheeler's illness their stay is impossible.

I want to explain some parts of Professor Wheeler's life history briefly. His life seems to be short as one count the number of years that he has lived. However, if one considers what he has accomplished during these years his life becomes long. The number of people who accomplishes such a large service for humanity is not very many.

His father was a farmer. He was born in New York in 1901. He obtained his B.Sc. from the Michigan State University and then he took a job at the same university. There, he taught and made research for

many years on plant breeding and crop production. His special study field has been potato breeding and production. He has published many outstanding papers and trained many students and because of his great success become an authority in his field. Today, in Michigan State, every farmer knows his name.

Professor Wheeler's service was not only for his own nation, he also wanted to serve for the people of the world. First, he had been in Japan to serve for Japanese people to help the agricultural development of Japan. Then he was at Okinawa University to help the establishment of the university and trained many students who continued his work on his leaving. He also was in India where he gave his long term advice to improve the agriculture of India.

At last, we see him in service for Turkish people. He had the responsibility of establishing the Plant Science Department of Ataturk University. When he started, in 1960, there was nothing but only the name of the department. A few Turkish member of the department were sent to the USA for training. By his great effort, today, he established the Plant Science Department with 11 staff members and about 124 students majoring in Plant Science. The department will give its first graduates in the next year.

These were not all of Professor Wheeler's accomplishments at Ataturk University. He was also a hard research worker. He spent most of his time at the university farm showing us how to grow red tomatoes and many other crops. He taught us what could be done for the agriculture of this country.

As it usually happens at newly established institutions, there were times that we, young assistants, lost our hopes because of the difficulties we faced. By his long time experience, Professor Wheeler knew how to renew our hopes and show us the light of the future of Ataturk University.

His hope has been very strong for Ataturk University. As he read in a book that "Garden of Eden" was around Erzurum, he frequently told us, pointing out the results of the experiments at the farm, "There is no reason why Erzurum can not again become a Garden of Eden."

We always remember his advice and work hard in the light of his direction and try to make Erzurum and Eastern Anatolia a Garden of Eden.

We have a key made for him to every door of the Plant Science Department. Whenever he comes back to Ataturk University he can get any room as his home.

I express my deep appreciation. Thank you all.

Fahrettin Tosun

FORMER NEBRASKA STAFF IN TURKEY

NAME	ADDRESS
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Crowe, Lawrence K.	2636 No. 56 St., Lincoln, Nebraska 68507
Doane, Ted H.	4230 X St., Lincoln, Nebraska 68503
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Frutchev, Cecil W.	
Goodding, Homer T.	1430 No. 38 St., Lincoln, Nebraska 68503
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Harrell, Bryant E.	Sycamore Landing, R.R. 3, Williamsburg, Virginia 23185
Hoiberg, Otto G.	2010 So. 26 St., Lincoln, Nebraska 68502
Judge, Homer V. (East Pakistan)	USAID/Texas A & M, APO New York 09683
Keller, Mrs. J. Orvis	218 East Prospect Ave., State College, Pennsylvania 16801

FORMER NEBRASKA STAFF IN TURKEY (Continued)

NAME	ADDRESS
Kroontje, Wybe	Virginia Polytechnic Institute, Blacksburg, Virginia 24061
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Ray, W. W.	2142 Lake St., Lincoln, Nebraska 68502
Rokahr, Mary	1743 So. 24 St., Lincoln, Nebraska 68502
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Weigel, Paul	8110 Sagamore Rd., Leawood, Kansas 66206
Weihsing, John L.	1201 No. 38 St., Lincoln, Nebraska 68503
Weldon, Marcus D.	1420 Urbana Lane, Lincoln, Nebraska 68505
Wheeler, Mrs. Ernest J.	531 Ann St., East Lansing, Michigan 48823

FORMER NEBRASKA SECRETARIES IN TURKEY

NAME	ADDRESS
Ames, Mercedes A.	4123 Randolph, Lincoln, Nebraska 68510
Crawford, Shirley	#812 Grosvenor Park Apts., 10401 Grosvenor Place, Rockville, Md. 20852
Crowe, Mrs. Vera	2636 No. 56 St., Lincoln, Nebraska 68507
Hughes, Regina (Mrs. Fred Clonninger)	3901 No. 11, Carter Lake, Omaha, Nebraska 68110
Lesoing, Doris	1545 D St., Lincoln, Nebraska 68502
Magorian, Mary Lou (Mrs. Ron Sherk)	8011 Reno Road, Lincoln, Nebraska 68505
McCullough, Sally	American Red Cross, U.S. Army Hospital APO U.S. Forces 09757
Neeman, Bonnie (Mrs. Carl Brenneman)	4640 Ramodell Ave., La Crescenta, California 91014
Nelson, Virginia Louise (Mrs. Geo. Bass, Jr.)	1493 Willis Mill Rd., S.W. Atlanta 11, Atlanta, Georgia 30311
Soucek, Robert	
Swanstrom, W. Wylene (Mrs. James Twombly)	143 Warren Avenue, Hawthorne, New York 10532
Wollen, Mary Jane (Mrs. Don R. Sapp)	318-4th Ave., Box 51, Copple, Pa. 16136
Woods, Beth (Mrs. Norman Howarth)	11218 Hogan Rd., Gaines, Michigan 48436



Professor Osman Okyar and Chancellor C. M. Hardin
Proffessor Okyar has been Rector of Ataturk University
for the years, 1964-66.

COORDINATOR'S COMMENTS

by

Jason S. Webster

About ten years ago, Turkey requested assistance from AID and the University of Nebraska in developing Ataturk University which was to influence the economic and social development of Eastern Turkey similar to the way in which the University of Nebraska has influenced Nebraska's development. During an inspection trip in October, Dr. E. F. Frolik, Dean of Agriculture and Home Economics at Nebraska, and I were reminded that those in Turkey who made the original request have been replaced many times. Most of the early thinking has been retained, but the influence of the classical universities of Turkey has remained. The time required for returning Turkish participants to reach positions of influence has resulted in some loss of desire to modernize university activities and procedures.

This resistance to change is not unique in Turkey. Many ideas obtained by participants in this country and from our staff in Turkey may not bear fruit in the immediate future, but will ultimately result in benefits which cannot be permanently stifled. The desire of Ataturk University to improve the welfare of Eastern Turkey is evidenced in live-stock research, whereby animals are improved and distributed among the villages along with education through Extension. The same is true in crop varieties together with improved cultural methods and irrigation. The Medical College is making Ataturk University and Erzurum the health center of Eastern Turkey. Health information is being extended through the many health units scattered over Eastern Turkey. The total image is a good one showing that progress has been made and that the combined efforts of Ataturk University, AID, and the University of Nebraska are contributing greatly to the education, health, and food production of Eastern Turkey.

A study made of a remote village by Professor Fenske and the Ag Economics Department is included in this report. It illustrates very well the necessity for time and patience in developing many areas of Eastern Turkey to their full potential. We admit that time is of the essence in bringing about a balance between food production and population in this area. Therefore, every effort must be made to reduce the time required to reach this balance.

The progress accomplished by men like Professor Ernest J. Wheeler will be multiplied many times in years to come. We are sorry to report his death in this issue, but are pleased to see that his work continues at Ataturk University. We were unable to find a more appropriate tribute to him than that given by his close friend and co-worker,

Doçent Dr. Fehrettin Tosun, at the time Professor and Mrs. Wheeler left Erzurum after four fruitful years.

We also received a report of the death of Mrs. John Winter in the fall of 1966 at La Jolla, California where she was staying with her daughter. Mrs. Winter lived in Erzurum from June, 1961 to July, 1963 while Professor Winter was our advisor for Botany at Ataturk University.

Our program has been assured of continued AID support until June 30, 1968. Prior to that date, a decision will be reached regarding the possibility of extending support for another five-year period. If the program continues, all areas of the University will be further strengthened, with emphasis on a graduate program which will reduce the need for sending students outside the country for graduate studies.

All levels of education in Turkey must be expanded if a balance between population and food production is to be maintained. Furthermore, food for export is needed to reach and maintain a favorable balance of trade.

PERSONNEL
UNIVERSITY OF NEBRASKA STAFF IN TURKEY
July 1, 1966 - December 31, 1966

NAME	POSITION	FROM	TO*
Bliven, Bonita	Secretary-Ankara	Feb. 25, 1965	Feb. 24, 1967
Bresson, Amel L.	Prof. Chemistry	Sept. 27, 1965	Sept. 26, 1967
Dunkelberg, George H.	Prof. Ag. Engineering	Jan. 8, 1966	Jan. 7, 1968
Fenske, Leo J.	Prof. Ag. Management	Oct. 8, 1960	Sept. 22, 1967
Hanway, Donald G.	Chief Advisor, Nebraska Group	June 21, 1965	June 20, 1967
Loewenstein, Duane E.	Prof. Ag. Extension	Oct. 13, 1966	Oct. 12, 1968
Perrin, Marie Louise	Secretary	June 3, 1965	June 2, 1967
Ross, James G.	Prof. Plant Science	Mar. 24, 1966	Mar. 23, 1968

Above staff members at Ataturk University, Erzurum, Turkey unless specified Ankara, Turkey.

* Departure date from Turkey.

ATATURK PARTICIPANTS IN THE UNITED STATES UNDER UNIVERSITY OF NEBRASKA
AID CONTRACT PROGRAM AS OF DECEMBER 31, 1966

NAME	FIELD OF INTEREST	LOCATION	ARRIVAL IN US	TERMINATION
AKMUT, Ozdemir	Economics	Uni. Nebraska	Aug. 8, 1965	Aug. 7, 1967
ASLAN, Demir	Economics	Uni. Nebraska	Aug. 8, 1965	Aug. 7, 1967
BAYDAR, Saffet	Plant Pathology	Uni. Nebraska	Jan. 25, 1966	Jan. 24, 1968
ERGIN, Seckin	English	Uni. Nebraska	Aug. 6, 1965	Aug. 5, 1967
GULTEN, Sefkati	Ag. Economics	Uni. Nebraska	Aug. 8, 1965	Aug. 7, 1967
GUNEL, Erol	Plant Breeding	Uni. Nebraska	Sept. 5, 1966	Sept. 4, 1967
GUNEL, Gunes	English	Uni. Nebraska	Sept. 5, 1966	Sept. 4, 1967
ISYAR, Yuksel	Ag. Economics	Uni. Nebraska	Aug. 8, 1965	Aug. 7, 1967
KOYCU, Coskun	Plant Science	Uni. Nebraska	Jan. 25, 1966	Jan. 24, 1968
KUSHAN, Battal	Ag. Economics	Uni. Nebraska	Aug. 8, 1965	Aug. 7, 1967
LELOGLU, Selahattin	Vet. Science	Uni. Nebraska	Jan. 25, 1966	Jan. 24, 1968
OZGUDEK, Fatma	English	Clemson Univ.	Sept. 5, 1966	Sept. 4, 1967
TANRIVERDI, Fuat	Horticulture	Georgetown Univ.	Nov. 3, 1966	Nov. 2, 1967

FORMER PARTICIPANTS UNDER UNI. NEBR. AID/CONTRACT
PROGRAM NOW UNDER ASSISTANTSHIPS

AKSOY, Ayhan	Animal Science	Uni. Nebraska	Jan. 27, 1964	June 30, 1968
BAYSAL, Ismet	Plant Science	Uni. Alberta	Sept. 6, 1963	Aug. 31, 1967
BEYGU, Sara	Chemistry	Uni. Nebraska	Jan. 24, 1964	Aug. 20, 1967
KIP, Ergun	Ag. Economics	Uni. California	Sept. 6, 1963	June 30, 1967
YILDIZ, Attila	Chemistry	Uni.No.Carolina	Sept.12, 1963	July 1, 1967

FORMER PARTICIPANT UNDER UNI. NEBR. AID/CONTRACT
PROGRAM NOW PERSONALLY FINANCED

OZDENGIZ, Ali	Ag. Engineering	Uni. California	Sept.11, 1963	Mar. 1, 1967
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TABLE OF CONTENTS

	PAGE
REPORT OF DONALD G. HANWAY, CHIEF ADVISOR	1
Administrative Comment	1
Graduation	1
Summer Program	1
Physical Plant Development	2
Participants	3
Personnel	4
Summary	4
Quarterly Report	5
New Arrivals, Inspectors, and Special Visitors	5
University Development	5
Buildings	5
Equipment	6
Operational Problems	7
The English Program	8
Ataturk University Administration	9
DEPARTMENTAL REPORTS	11
Agricultural Economics - Leo J. Fenske	11
Agricultural Engineering - George H. Dunkelberg	15
Agricultural Extension - Duane E. Loewenstein	23
Chemistry - Amel L. Bresson	25
Plant Science - James G. Ross	31
APPENDIX	35

REPORT OF THE
UNIVERSITY OF NEBRASKA GROUP IN TURKEY

July 1, 1966 to December 31, 1966

Donald G. Hanway, Chief Advisor

I. ADMINISTRATIVE COMMENT

Graduation

At the end of the 1965-66 school year, Ataturk University graduated its largest class, 152 students. Of these, 130 were from Agriculture and 22 from Letters and Science. If 400 students are accepted in the fall, enrollment will climb to about 1,600 students.

Graduation exercises scheduled for July 3 were cancelled to avoid an occasion at which students might create incidents. They had threatened boycott of the exercises as a demonstration against the higher accumulative grade average required for graduation. The regulation boosting the average required to 6 (60) was passed four years before and finally became fully effective with this class. Subsequent studies of grades showed that the students had no basis for claiming that the new requirement would keep a large part of the class from graduating. Only a very few were affected. If the Student Records Office had had cumulative averages calculated, as would seem desirable, a quick tabulation to show the actual picture could probably have prevented a lot of wasted time and emotion.

The Student Records Office has made considerable progress in the past year in improving its functioning as a depository. There are many additional areas of service, however, that it needs to handle. It should pick up the responsibility for class scheduling, checking more closely on make-up examination status (as long as they are allowed), and improved grade reporting. The office needs more and better employees. Lack of suitable cadre positions under the present law is a factor affecting opportunities for further improvement.

Summer Program

The end of the semester in early July produced a general exodus of staff from the campus. Many were gone until about September 15, some till later. A relatively small number stayed on the campus and were active in Ataturk University's program with only a one-month vacation.

Vacations are essential. Staff and families at Erzurum do need a

chance to get away for a period each summer. But the implications of present procedures are many. The Faculty of Agriculture needs to use the short summers effectively if it is to have an effective research program in the field directed to the problems of the area. These problems cannot be resolved in the laboratory in winter. Similarly, the program of the Medical Faculty is continuous. One facet of the problem is a very limited research program in Letters and Science. Limited senior staff, library, and laboratory facilities all contribute. This will continue to be the case for several years, perhaps indefinitely. In the United States, different demands on staff are recognized by differential salaries. Persons working only during the academic year are paid less than those who also carry a summer program. At Ataturk University, strong dissatisfactions are certain if one person essentially vacations in Ankara or Izmir all summer while another of the same rank and salary is expected to carry a heavy field program at Erzurum. By-laws and rules established by the Board of Trustees under a new law will need to provide for pay according to contributions of the individual to the University's program.

The field research program at the University Farm was primarily a Plant Science program this year. In an irrigated wheat variety trial, yields of 75 bu/a were achieved. Excellent trials of many vegetables, corn, sugar beets, potatoes, soybeans, sorghum, small grain, and grasses were also involved. About two hundred visitors at a Field Day on July 20 saw the trials in progress.

With appropriate administrative control on vacations and the careful planning of field activities to contribute to long-range project objectives, the present staff has considerably more capability than was evident by this summer's program.

The pressure to do only those things that meet a thesis requirement for the next degree is still a strong obstacle to developing a program directed to problems of the area.

The University made some contribution to relief in the Varto-Hinis area after the earthquake on August 19. Medical staff gave immediate help in rescue and treatment of injured. The Agricultural Engineering Department prepared a design and suggestions for temporary animal shelter. Based on its open-shed housing experience, the Animal Science Department was able to give some guidance on supplemental feed requirements if open-shed housing is used for livestock in the earthquake area.

Physical Plant Development

A 24-unit building of 2-bedroom apartments was completed at the end of September and ready for occupancy. This along with the one completed in May has helped, but faculty housing is still a priority need. Added units of bachelor quarters and 2-bedroom apartments have

been started.

The second student dormitory, the Plant and Soil Science Building, and the new Library are at the point of completion where they can be used this fall. Failure to get transformers to supply electricity to them, however, may delay their use. The need for the dormitory and the Plant and Soil Science Building is critical.

Additional progress made on physical plant was as follows: (1) start of a third dormitory, (2) development of a children's playground, (3) landscaping and sidewalk development in the faculty housing area, (4) rapid progress on Medical Faculty buildings, (5) completion of two poultry research buildings, and (6) leveling an additional area of land near Well No. 4.

Participants

Under the leadership of Howard Eaton, the Peace Corps initiated a 6-week intensive English program at Ataturk University. Assistants were the predominant group involved and were handled in beginning, intermediate, and advanced groups. While fewer people were involved than had been hoped for, the program proceeded well until the first week in August. At this time, Dr. Robert Shields of the A.I.D. Training Office was invited from Ankara to give an evaluation of the proficiency levels reached. The scores of most assistants on tests were much less than they had anticipated but were not surprising to Dr. Shields or their instructors. The immediate reaction was one of great dissatisfaction. The students boycotted classes and essentially terminated their study of English for the summer.

The performance of the students in English, we now recognize, was what would have been expected with normal progress for the time invested. Instead of the 700-800 classroom hours that had been a stated figure for gaining proficiency, we now recognize that 1,500 hours or a year of full-time study (or its equivalent in study and practice) is needed. The criticism of ability of the Peace Corps as teachers is not justified. In spite of their lack of experience and very inadequate supervision and support during the first semester, the books and system used resulted in expected progress for the time invested. The students had been led by the inexperience of the staff to expect more rapid progress than is possible.

Mrs. Dorothy Dunkelberg, serving as English Department Chairman the second semester, was able to give some guidance and improve the administration of the English program during the second semester. With some background of experience, an improved program in 1966-67 should result.

Three assistants showed enough proficiency in English to go to

the U. S. as participants: Erol Günel from Plant Science, Güneş Günel from English, and Fatma Özgudek from English. The Günels went to Nebraska and Miss Özgudek to Clemson.

Three participants at Nebraska are expected to return at the end of this quarter. They are Hayati Celebi of Soils, Necdet Leloğlu of Animal Science, and Mehmet Duzkaya of Mathematics. The return of these three will give some added and badly needed staff capability.

Grade reports at the end of the year indicated generally favorable progress by the participants in the U. S.

Personnel

There were no changes in the Nebraska staff during this quarter.

Summary

For a number of reasons mentioned previously, the contributions of the Nebraska staff and progress in Ataturk University development during this quarter have been disappointing. There appears to be no hope for an effective program until a favorable decision is reached on a new law for the University.

There is a strong tendency on the part of many to expect more of Ataturk University at the present time than it has the capability of delivering. It is short of senior, experienced staff. Including Deans, there are only three persons of professor rank and six of doçent rank in each of Agriculture and Letters and Science Faculties. There are 44 doctor assistants in the two faculties and 89 assistants. Over 30 new assistants have been added this summer indicating fair success in recruitment. This addition, while an essential first step in staff building, actually represents a very substantial added training burden on the senior staff. With enrollment climbing to 1,600 students, there can be only limited activity in research. Designating any significant effort to extension activities seems impossible until added participants return to reinforce the approximately 30 now distributed through the two faculties.

This report describes many problems. There is no reason to use rose-colored glasses in evaluating them. Still, the opportunity at Ataturk University is very great if Turkish action and support set the stage for use of expanded help and an increased rate of staff training and development. Until the Turks set the stage for progress at Ataturk University, American efforts will be ineffective. If they do, Ataturk University is a potential leader in helping the nation revise and develop an excellent system of higher education.

QUARTERLY REPORT

October 1 - December 31, 1966

On October 10, 1966, opening exercises were held starting the eighth academic year at Ataturk University. When the last new student was enrolled in November, total enrollment was about 1750, up at least 100 students from 1965.

New Arrivals, Inspectors, and Special Visitors

Dr. Duane Loewenstein, Extension Advisor, joined the group from the University of Nebraska about the time classes started for a two-year tour. Dr. E. F. Frolik, Dean of Agriculture and Home Economics, and Mr. J. S. Webster, Campus Coordinator, were at Erzurum on an inspection trip from October 19 to 29. Mr. Doyle Casey accompanied them to Erzurum for his second visit in October. Mr. Ragnar Arnesen, Assistant Director of USAID, also visited Ataturk University in early October. Mr. Attila Torunoğlu, AID photographer, spent a week in Erzurum in November to help make a slide set to tell the Ataturk University story. Dr. Frank Baker, Chairman of Animal Science at the University of Nebraska, spent just over two days in Erzurum as a part of his month's tour with a team of agricultural experts making a special study and report to the Ministry of Agriculture.

Resulting from the visit of Dean Frolik and Mr. Webster was an evaluation of the proposed E-1 developed to support Ataturk University's five-year development plan and considerations for a one-year extension of the present contract if the longer range program is not implemented. A conference with each of the departments in the College of Agriculture served to acquaint the inspectors with their program and needs.

UNIVERSITY DEVELOPMENT

Buildings

During this quarter, the second men's dormitory was completed and occupied. Another building with 24 two-bedroom faculty apartments was occupied. Heat and electricity were provided for the new Plant and Soil Science complex. It will be occupied by the Faculty of Agriculture at the close of the first semester. The Rector's office and other administrative offices will be moved to the new Library at the same time. The actual library operations will also be moved there about the same time.

Progress was made on the Medical Faculty buildings on the campus, the third student dormitory, and additional faculty housing. Conduits were laid and telephone cables were taken off temporary poles and put

underground. Additional concrete poles were installed and a network of power lines strung through the campus. A pump was installed on Well No. 6 so it can be used for irrigation in 1967.

At the hospital, remodeling of a building for an outpatient clinic was completed. This provides excellent outpatient facilities in conjunction with the hospital. Good progress was made on the dormitory for the nursing school. The classrooms and laboratories are ready to be occupied except for heat. Progress was made on additions to the hospital for laboratories and additional operating rooms. Some surplus equipment was received from Europe, and a major list developed to be purchased from an AID loan, if approved.

The following members of the Turkish staff earned advanced degrees as indicated:

Hasan Yüksel	Professor	Plant Science
Kemal Biyikoğlu	Professor	Animal Science
Ziya Alkan	Doçent	Ag Engineering
Hirşut Ertuğrul	Doçent	Ag Engineering
Macit Özhan	Doçent	Animal Science
Ferit İçarci	Doçent	Animal Science
Lutfi Oğus	Doçent	Soil Science
Ahmet I. Turek	Doçent	Turkology

Prof. Dr. Ismail Yalçınlar from Istanbul University completed his two-year appointment as Dean of Letters and Science. He was followed in this position by Prof. Dr. Şaban Karataş. Prof. Dr. Kemal Biyikoğlu was then made Chairman of the Animal Science Department. Prof. Dr. Ahmet Özel was appointed Rector of the Black Sea University at Trabzon and left for his new duties. He had been the first Rector of Ataturk University.

Fourteen assistants were sent to METU in Ankara for intensive English training. None showed adequate advancement and proficiency to be sent to the U. S. in January, 1967. Most should be ready by the start of Summer Session in June. Fuat Tanriverdi of the Plant Science Department was sent to Georgetown University for ten weeks of intensive English before going to the University of Nebraska to work toward a Master's degree in horticulture.

Equipment

AID turned two excess 1964 Chevrolet station wagons over to Ataturk University in December. One was for the Nebraska Group. Receiving it allowed turning a 4-wheel drive International Travelall back to the University. The other was for the use of Ataturk University. These vehicles, while an improvement over the older vehicles in use, have over 75,000 miles on them and cannot be considered adequate transportation within the policies of the U. S. government nor the State of

Nebraska, especially for personnel operating under the travel conditions of Eastern Turkey. Under the circumstances, however, they were much appreciated.

Orders for three particular sets of equipment placed during this period merit special mention. One was equipment for a language laboratory needed to support the English teaching program. The second was a number of items of field plot equipment that will give the staff the capability to put out variety and fertilizer trials in an effective manner, based on the extensive experience in productive field research programs in the U. S. Equipment available at Ataturk University was completely inadequate for this purpose. The third was a number of items of audio-visual equipment to improve classroom teaching.

Operational problems

Serious problems exist because of the different regulations governing the Faculty of Agriculture and of Letters and Science. The holding of make-up examinations and registration in October along with the timing of final examinations will have given Agriculture a reasonable first semester of instruction. The regulations in Letters and Science, on the other hand, were followed more closely than in recent years. They specify examinations in "the last half of October, January, and June". As a result of delaying registration in October until make-up examinations were completed, many classes did not start until about November 1, long after the University's opening exercises. Final exams are to start January 16, 1967 instead of January 23 as in Agriculture. The effect is to shorten the semester to ten weeks of classes which is completely inadequate educationally. Since the Agriculture Faculty is dependent on Letters and Science for many service courses and some reciprocal relationships exist, different calendars for the two faculties produce a lot of confusion among staff and students. If such activities were organized under a unified administration and set of regulations, these unnecessary problems would be avoided.

The Nebraska Team has been recommending doing away with the system of make-up examinations for several years and the establishment of a meaningful system of prerequisites. Nothing significant has been done on this. Again, regulations between the two faculties are quite different.

The calendar for the school year finally received official action in late December but was still not published at the end of the year. The calendar for any school year should be firmly established by the preceding spring at the latest so it can serve as a guide to all scheduling and planning activities.

New students are selected for Ataturk University by performance on nationwide examinations that serve other universities as well. The

other universities open about three weeks later than Ataturk. In each of the past two years, Ataturk University has been asked to accept additional new students at this later date. These are definitely handicapped in their first-semester courses and cause much disruption in classes and schedules as attempts are made to fit them in.

Student enrollment at Ataturk University is now larger than the staff can serve adequately. Total enrollment is about 1750 students. To serve more than 800 students, the Turkish staff on hand in Agriculture has four professors and nine doçents including Deans and department chairmen. A few others have been participants, including one who earned a Ph. D. and four who earned M. S. degrees in the U. S. A total of 27 have been U. S. participants or have had significant advanced training abroad. This gives a gross student-teacher ratio of over 30 to 1.

The Letters and Science Faculty has essentially the same number of students as majors but has a substantial load of service courses. Including the Dean and department chairmen, the Turkish staff has two professors and seven doçents. Twenty of the staff can be considered to have advanced training in the U. S. or otherwise. This gives a student-teacher ratio of over 40 to 1.

If the Agriculture Faculty had available now the 14 studying in the U. S. and Canada, the student-teacher ratio would still be 20 to 1. When the pressure that exists for each of the individuals below the professor degree to earn his next degree is recognized, the effort that is available for research and extension is obviously limited and the quality of the curriculum and teaching is still less than satisfactory. Fewer than ten from Letters and Science are studying in foreign countries.

Two conclusions seem justified from this analysis: (1) student enrollment should not be allowed to increase further until more staff is available; and (2) staff development is the primary problem in the development of Ataturk University and must be speeded up by both recruitment of qualified staff or recruitment and training of new assistants. The latter is apparently the method to be relied upon. This takes considerable time. A great speedup in the participant program would seem the best way to do this. This, in turn, would depend on an effective English language teaching program at Ataturk University.

The English Program

This semester the English teaching program is being carried as follows: 77% by eight Peace Corps volunteers, 10% by two English volunteers, 8% by Turkish assistants, and 5% by Mrs. Dunkelberg and Prof. Mundy, the latter a British Professor of Turkology employed on a one-year contract. Three English assistants are participants in the United States. It is uncertain whether any one of them can achieve a Master's Degree in a reasonable time. All are studying primarily under-

graduate courses.

Mrs. Dorothy Dunkelberg, as Acting Chairman of the Department, has arranged the classes and allocated her staff to give the best organized and comprehensive program yet achieved at Ataturk University. With their last year's experience to draw on, the Peace Corps volunteers have been much more confident and effective. Progress by students has been good--primarily limited by the short length of the teaching semester as discussed earlier in this report.

As yet, the University administration has been unable to arrange employment of any of the Turkish linguists trained at Georgetown University and experienced in teaching English as a foreign language. This would fill a great need for leadership in this aspect of the English program. Neither has the University of Nebraska been able to fill its technician position in English. Recruitment of a number of assistants and giving them advanced training is an urgent need to assure a Turkish staff to carry the long-range load of this department.

The best place to give intensive English training to Ataturk assistants is at Erzurum. Equipment has been ordered to equip a language laboratory. Qualified teaching staff is the obstacle that will be most difficult to clear.

Fourteen assistants who studied English at Ataturk University on a part-time basis in 1965-66 were sent to Ankara for further intensive instruction. The Gazi Institute was unable to get its program organized early. METU agreed to house and provide instruction for this group. Classes were not started until November. This group had gone without instruction from early August. Their supervisor at METU reported that none would reach an adequate proficiency for participant training by January. Most should be by May so they could start in the Summer Session. Getting this group of assistants started on advanced programs in the U. S. is very important to Ataturk University development.

Ataturk University Administration

The most critical occurrence during this quarter was the termination of Osman Okyar's two-year leave from Ankara University to serve as Rector of Ataturk University with no provision for his extension or immediate replacement. At the end of 1966, Ataturk University was adrift. Its pattern for development and role have never been very clearly identified or continuously supported by the Government of Turkey through its Ministry of Education. Osman Okyar was the tenth appointee as Rector of Ataturk University since 1958. It appears that no one in the Ministry of Education under which the University legally operates has supported its needs for continuity or assumed any significant responsibility for the direction and rate of its development.

Developing a new university in Eastern Turkey entails many special problems. In the absence of autonomy and administrative control for dealing with these problems, an appointed Rector needs active support and assistance from the Ministry of Education.

Ataturk University is destined to drift as long as it operates in the present legal framework. There is no responsible body or group to define its role as an institution, establish policies and procedures for its operation, and support its needs before the Grand National Assembly. These are not responsibilities that can be carried effectively by the faculty-at-large in a complex institution. An institution must have a clearly understood role and a responsible administration with authority to establish the policies and procedures necessary to implement its program. A series of Rectors on two-year appointments cannot meet the administrative leadership needs of a modern university.

Lack of integration and coordination in the administration of Ataturk University has made assistance efforts largely ineffective. The role of the University of Nebraska Group is to advise, help, and support the institution's development program. There is such a lack of coordination in administration and such a dispersion of individual activities and efforts among the Turkish staff that the Nebraska Group can find little organized effort which is receptive to significant professional help.

The present Rectorship dilemma results from much deeper problems. Major changes are necessary before Ataturk University can achieve a rapid rate of development toward excellence as a modern university capable of serving the needs of the Turkish nation. These needs are great. The opportunities for Ataturk University are almost without limit. Only the Government of Turkey, however, can specify the role it wants Ataturk University to play and establish a sound administrative framework to guide its operations and development. This is a very significant problem for Turkey. It deserves prompt, thoughtful, and courageous action from Turkey's leaders.

AGRICULTURAL ECONOMICS DEPARTMENT

Professor Leo J. Fenske

QUARTERLY REPORT
July 1 - September 30, 1966

Graduates and Students

The 1965-66 graduating class included 20 majors in Agricultural Economics. Most of these men will go into the army this fall for a two-year period before starting their professional careers. Carry-over students number 12, six from each of the two previous classes.

Enrollments expected for the 1966-67 school year are as follows:

Agr. Economics I	40
Agr. Economics II	33
Agr. Economics III	30
Agr. Economics IV	48
Agr. Economics Carry-over	12
Total	<u>163</u>

Research Activities

Two farm surveys were made by staff members during the summer. Assistant Turgut Hatunoglu made a survey in the Ağrı-Eleşkirt Valley covering 90 farms. Doçent Dr. İbrahim Aksoz carried out a similar survey in the Erzurum Valley on another 90 farms.

These data are now being analyzed by the project leaders. The results will be used in farm management teaching and extension activities.

In addition to this, I completed a monograph entitled, "Kabataş: A Mountain Village in Erzincan Province." This is a supplement to an earlier study made by Dr. Assistant Gulten.

Field Trips

Two field trips were made in addition to the farm survey work. On August 7-12, a field trip was made to Artvin and Rize Provinces with Dr. Asst. Kutlu Zoral. The purpose of this trip was to study the agricultural activities in these provinces.

Three days, September 7-9, were spent in Ankara on duty when returning from a vacation trip to the Mediterranean Sea area.

University Development

I served as Chairman of the Class Scheduling Committee. The program for the first semester of the 1966-67 school year has been completed. By the end of the summer, no Turkish staff members were available, consequently, the Chairman finished up the job.

Long-range scheduling, rather than semester by semester, must soon be undertaken. This is a problem in administration.

No work could be done on the school catalog for the same reason as above. It is imperative that a catalog be printed so as to give continuity and organization to the academic affairs.

I was re-appointed to the School Calendar Committee for the 1966-67 school year. Other members are Dr. Assistant Aydin Turkbali and General Secretary Ishan Ozgelebi.

Publications

During the summer, three articles that I wrote have appeared in Turkish journals:

1. "Agricultural Development and Cooperatives in Eastern Turkey", conference given at Istanbul University in 1964. Istanbul University Publication No. 1190.
2. "Land and Man in Eastern Turkey", conference given at Istanbul University in 1965. Istanbul University Publication No. 79 (Reprint).
3. "The Role of Management in Farming", conference given at Ataturk University in 1965. Management Digest, September 1966.

Staff Situation

On duty at Ataturk University:

Assistant Ali Riza Karacan - new assistant.
Assistant Cevdet Oğut - new assistant.
Assistant Metin Çağlar - new assistant.
Assistant Turgut Hatunoğlu - doctoral candidate.
Dr. Asst. Kutlu Zoral - beginning doçent's work.
Doçent Dr. Ibrahim Aksoz - professor's candidate.
Prof. Leo J. Fenske - department chairman.

Participants in United States:

Dr. Asst. Şefkati Gülten - M. S. candidate at Nebraska.
Assistant Yüksel Işyar - M. S. candidate at Nebraska.
Assistant Ergun Kip - Ph. D. candidate at California, Davis.

Staff building is a slow process, but some headway has been made. For example, in 1960 upon my arrival at Ataturk University, there was no Turkish staff on duty in Agricultural Economics.

It is hoped to secure two or three more assistants in October. Assistants Çağlar and Oğut have been nominated as participants. They will go to the United States as soon as their command of English is sufficient to undertake graduate study.

QUARTERLY REPORT October 1 - December 31, 1966

School Opening

The 1966-67 school year officially opened on October 10, 1966. However, the first week (October 10-15) was spent in registering Agricultural Faculty students. The Science and Letters students could not be registered until their make-up exams were completed late in October. Thus, classes began in the Agricultural Faculty on October 17, but not until October 24 or later in the Science and Letters Faculty. The Medical Faculty was already in session.

Ataturk University shows a 17-week semester, but in actual practice, it is much shorter. This situation can only be corrected by having unified student regulations, and by enforcing them. Many students, including first year students, registered even later than the above mentioned dates.

Department Courses

The following courses are being offered during the first semester:

Agr. Econ. 54	Rural Sociology	125 students
Agr. Econ. 103	Agricultural Law	197 students
Agr. Econ. 104	Farm Management	85 students
Agr. Econ. 105	Farm Credit	176 students
Agr. Econ. 106	Farm Records	54 students
Agr. Econ. 202	Land Economics	98 students
Agr. Econ. 203	Price Analysis	80 students
Agr. Econ. 208	Agricultural Policy	58 students

The classes are large because many students from other departments have selected the above courses as electives.

Research Activities

Both Doçent Dr. Aksöz and Assistant Turgut Hatunoğlu have made good progress on analyzing their farm survey data (see previous report).

Dr. Assistant Kutlu Zoral is making a study on "The Income Elasticity of Milk Consumption in Erzurum". The students in his Price Analysis class collected the data.

I have started to analyze the Extension survey data previously collected.

English Language Study

Assistants Metin Çağlar and Cevdet Ögüt are at METU studying English in preparation for going to the United States as participants.

Assistants Karacan, Uluğ, and Çakaci are studying English at Ataturk University.

Other Activities

On November 8, I gave a paper at the Eastern Turkey Development Conference held in Erzurum.

Other activities include continued work on various committees. The Class Scheduling Committee for the second semester will be headed by Doçent Dr. Ögüs. I will serve in an advisory capacity.

Assistants Uluğ and Çakaci were the successful candidates in the October, assistant's examination.

Rector Okyar, Dean Ergene, Doçent Dr. Aksöz and I were guests of the Agricultural Bank and visited the Supervised Credit Projects in Tokat and Erzincan (October 27-November 2). This proved to be a very informative and worthwhile trip.

The Agricultural Economics Department has furnished the Agricultural Bank with all its course outlines. Cooperative work with the Bank will be planned in a February meeting.

The grade reports for the summer session of Assistants Kip, Işyar and Gülten were very favorable with B's and A's reported.

AGRICULTURAL ENGINEERING DEPARTMENT

Professor George H. Dunkelberg

QUARTERLY REPORT July 1 - September 30, 1966

The end of the first semester was somewhat of an anti-climax as no graduation ceremony was held. This summer was the time when our daughter came from the University of South Carolina for a 7-week visit and afforded us an opportunity to spend a couple of weeks traveling in Western Turkey. Although summer is a somewhat quiet time at Ataturk University, many varied activities were carried out, and the August 19th earthquake created a bit of confusion.

Current Activities

The land leveling at the University Farm proceeded well and some 35 acres were completed. Additional smoothing needs to be done, and we hope to obtain a large landleveler by next season to put our land in shape for efficient surface irrigation. The Department has secured the cooperation of D.S.I. in formulating a plan for adequate water supply to the whole of the University land area. If this plan can be completed and carried out, it would have a tremendous impact on the appearance of the campus and on the operation of the farm.

Departmental Progress

Early in July, examinations for assistants were held and Agricultural Engineering was fortunate to secure three fine additions to the staff: Kazim Tulucu, Tahir Ekmekyapan, and Omer Fethullahoglu. These men are all at work but, unfortunately, we were not able to secure housing for them on the campus. Quarters for faculty and staff are very short despite the fact that a new 24-unit, 2-bedroom building should open in the next few weeks. This problem increases the difficulty of securing and holding staff. Without additional trained staff, we cannot offer a major curriculum.

Existing Problems

In a staff development program, it is necessary to first secure assistants, then prepare them in a foreign language, and send them abroad for training. This calls for a lead time of at least four years, and without adequate housing, the first step cannot be accomplished. Housing in the city of Erzurum is both extremely short and expensive.

This problem must be solved soon if the University is to progress.

Enrollment this fall will be about 1,400. The University houses about 800 students in a dormitory designed for 400 and others, including a number of girls, stay in classrooms of the Arts and Science and Chemistry Buildings. This not only results in inadequate housing but uses badly needed classrooms. Many classes of up to 300 are attempted but it is impossible to teach well, especially in laboratory periods, with classes of this size. It was hoped that the new Soils Building and Plant Science Building would be available this fall for teaching which would relieve the demand for classrooms, but as the electricity is not connected, these two buildings cannot be used.

Much of the future of the University hinges on the housing problem. If buildings cannot be provided, enrollment should be curtailed to the number of students that can be adequately handled.

Other Activities

The repair of our vehicles continues to take an undue amount of time and money. Despite the resources expended, we are never assured of reliable transportation. Activities away from the immediate vicinity of the campus are curtailed because of transportation difficulties. Travel in this eastern part of Turkey is essential if we are to begin to understand the problems involved.

Some progress is being made on improving the drainage at the open type of beef barns. It will require considerable earth moving to completely solve this problem and may eventually call for concreting of the lots. It is too bad that grading to provide adequate drainage was not accomplished at the time the buildings were constructed.

Progress has been made in securing some equipment for soils work so that research in drainage and irrigation can be carried out.

U.S.I.S. film and projection equipment continues in use, and should provide good training this year.

The Earthquake

Although we have experienced a number of tremors this year, a very long and strong shake occurred on August 19 and another on August 20 followed by tremors at irregular intervals. Only slight damage was done to University buildings and no one was injured. The center of the earthquake was at Varto, about 50 air-miles south of Erzurum. Several members of the Agricultural Engineering Department visited the Varto area on August 25 to check on damage to buildings.

Most deaths resulted from collapse of village-type houses and barns. In this type of construction, walls are built of rock and/or mud blocks put together with mud mortar. Roofs are constructed of logs laid crib-fashion with occasional supporting posts. Fastening of this heavy frame is almost non-existent and depends mainly on gravity. The roof frame is covered with brush or straw, with soil and rocks piled on top, sometimes to a depth of several feet. Leakage is almost always a problem during wet weather.

When the earthquake occurred, the walls crumbled allowing the heavy roofs to fall in on the occupants. If the shake had happened at night, the death count could have easily been 10 to 20 times greater. It would probably be most difficult to design a building more susceptible to earthquake damage than that generally used in the villages of Eastern Turkey. However, since trees are few and income low, the villager uses those materials which he has at hand or those he can afford to buy.

Some reinforced concrete buildings also collapsed. Here, concrete floors were very heavy and in many cases the concrete was poor. One sample of concrete from a reinforced beam could be easily crumbled in the hand. Observation of concrete construction has shown little regard for quality control. The water-cement ratio is disregarded, water used is often not clean, aggregate is dirty, while mixing and filling of forms is often inadequate. Regulations exist for controlling building construction but inspection is difficult and testing seldom carried out.

As a possible aid in rebuilding shelters for animals, a pole-barn was designed and submitted. It should be earthquake resistant as it is adequately braced and has a relatively light sheet-metal roof. The buildings at Varto which had sheet-metal roofs showed that these roofs did not break up and fall on the occupants. Metal roofing is not manufactured in Turkey at this time, and stocks of roofing available are to be used in the construction of temporary housing for people in the earthquake area. The merits of metal roofing are recognized but supplies are inadequate and expensive. Plants to manufacture roofing and distribute it at a reasonable price to villagers would be a great contribution to housing in Eastern Turkey.

For light, strong roof framing, sawed lumber is essential. This is necessary for adequate fastening and bracing. Much wood is now used in roof construction but in an inefficient log form. Consequently, the wood now used is both expensive and wasteful.

This earthquake has demonstrated the great need for agricultural engineers who are trained in the design and construction of farm and village buildings. A laboratory where the value of fastenings and bracing could be demonstrated would help greatly. Students need to be shown how to mix concrete, and a testing machine to show the breaking

strength of concrete would not only be of value to students but to builders, who could perhaps be reached through field days or short courses.

Language Laboratory

At the request of the Rector, several language laboratories in the Ankara area were inspected. A report on the equipment necessary and the operation of such a facility along with recommendations for a language laboratory for the University was submitted.

QUARTERLY REPORT October 1 - December 31, 1966

Retrospect

This has been a busy quarter at Ataturk University. Construction proceeded rapidly on several new faculty apartments and a new student dormitory was started. Students have moved into the second dormitory and all work is apparently finished on the Soil Science Building, Plant Science Building, and the Library. We should move into these last three buildings early in 1967. Many new concrete utility poles were erected and cables completed. Several small buildings to house transformers were also completed. Telephone cables on the campus were placed in new underground conduits. All of the above work was aided by the weather as we have had a relatively mild fall.

Departmental Activities

School officially opened on October 10, and most classes began within a week or ten days.

Classes Offered in Agricultural Engineering

Agricultural Engineering 1	Technical Drawing	176 students
Agricultural Engineering 2	Farm Machinery	176 students

Agricultural Engineering Staff

Prof. Ahmet Üzel	Acting Chairman
Prof. G. H. Dunkelberg	Advisor
Doc. Dr. Ziya Alkan	Farm Structures
Doc. Dr. Hursit Ertuğrul	Irrigation

Dr. Asst. Hamza Dincer	Farm Machinery
Dr. Asst. Battal Kushan	Farm Machinery
Dr. Asst. Ali Özdengiz	Irrigation
Dr. Asst. Nevzat Sişman	Farm Structures
Asst. Unal Alice	
Asst. Tahir Ekmekyapan	
Asst. Alton Ersayam	
Asst. Omer Fetullahoğlu	
Asst. Kazim Tülücü	

Staff Changes and Development

1. Prof. Ahmet Özel was transferred to Trabzon Technical University during the quarter. Although he will be missed in the Agricultural Engineering Department, he leaves a large void in his primary assignment, Chairman of the Mathematics and Physics Department.
2. Both Ziya Alkan and Hursit Ertuğrul completed all work for their Doctor's degrees and successfully defended their theses. These two, our first Doctors, will add much to the stature of our Department.
3. Battal Kushan is continuing his work in the Agricultural Engineering Department at the University of Nebraska.
4. Ali Özdengiz continues work in California, but is expected to return for our second semester.
5. Unal Alice is one of the group studying intensive English at Middle East Technical University, preparing himself to qualify as a future participant.
6. Alton Ersayan is working on his Doctorate at Istanbul University.
7. Tahir Ekmekyapan, Omer Fetullahoğlu, and Kazim Tülücü are studying beginning English here at Ataturk University as well as assisting in teaching.

Other Departmental Activities

1. After a conference with the Rector, the Chairman of Animal Science, and the Farm Director, Ziya Alkan and I were instrumental in getting the outside pens of the cattle barn regraded to improve the drainage. Although the outlet still needs additional work, including drain pipe, conditions are much improved.
2. Ziya Alkan's plan for the new sheep barn was accepted and the structure has been completed, essentially according to plan, in

conjunction with the old barn on the main highway. The roof of the old barn, which had been damaged by wind, was repaired. The new sheep barn is of the open-front type, pen divisions are of wood planks, and the entire facility is enclosed in a wolf-proof fence. Drainage is very good. Feed troughs and hay racks are of wood. Excellent doors and gates were constructed at the Farm. Approximately one thousand sheep are on test in this new facility.

3. Hursit Ertuğrul arranged with DSI to clean and case the well at the new sheep barn. This well now has water at a depth of 27.5 meters and, according to DSI, can produce at the rate of thirty liters per second. Hursit also had the 2.5-inch drop pipe and pump cylinder placed in the well at a depth of 33 meters.

4. Nevzat Sişman and I located the windmill (ordered several years ago by Professor Steele) in storage at the Farm. We checked the parts, obtained those bolts and nuts which were missing, and erected the mill over the reconditioned well. Help was furnished by men from both the Farm and the Research Institute through the cooperation of the Farm Director, Turgut Olgun, and the Director of the Research Institute, Fahrettin Tosun. This well now furnishes water for 1000 sheep but has the capacity to irrigate a considerable acreage in addition.

5. Ziya Alkan, Hursit Ertuğrul, and I worked with DSI in preparing a long-range water supply plan for the entire University, including the Farm. Tentative plans call for some fifty wells to furnish water for the campus as well as irrigate most of the 10,000 acres in the Farm. DSI is now preparing a 1/5000 scale map from a new survey as one of the primary steps in the planning.

6. Nevzat Sişman made arrangements with one of the local technical schools to construct 100 drawing tables which, hopefully, will be finished by the time we move into the new Soils Building. At present, students use pieces of pressed wood over chair arms in drawing.

7. Hamza Dincer is making a comparative study of animal and tractor power as used in this section of the country. He plans to equate the results in recommendations for farm machinery.

8. Ziya Alkan is preparing a publication on plans for animal shelters. He expects to make a study of poultry houses in the future.

Personal Activities

In addition to those already mentioned, I was engaged in many projects not directly related to the Department. Some of these will be mentioned briefly.

1. Weekly meetings of the Agricultural Faculty Professor's

Council attempt to solve problems arising in the Faculty of Agriculture.

2. Served as Chairman of the committee to consider accepting Ziya Alkan and Hursit Ertuğrul as Doçents in the Department of Agricultural Engineering and Faculty of Agriculture.

3. Served on the committees to examine prospective assistants in the Department of Agricultural Engineering and in the Department of Physics and Mathematics.

4. Made a trip to the Lake Van area with Dr. Ross, Ahmet Akyürek, and Oktay Turhan where we observed the methods and machines used in planting wheat in deep furrows. Apparently this method is peculiar only to this one section of the country and is practiced to increase available moisture by trapping snow in the furrows. We hope to create interest in this system here at the University and conduct tests to determine its advantages, if any.

5. Several times during the quarter, I had the opportunity of showing visitors around the facilities of the University. These included Ward Taylor and a group of bankers from Denizli.

6. A number of visiting groups came to the University during the quarter. These included Dean and Mrs. Frolik and Mr. and Mrs. Jason Webster of the University of Nebraska. Mr. Ragnar Arnesen and Mr. Doyle Casey of AID/Ankara were also here on evaluation.

7. In hopes that funds may become available to equip some of the badly needed laboratories in the Agricultural Engineering Department, detailed lists of shop equipment were prepared.

8. Detailed specifications of equipment for a language laboratory were prepared.

9. Other committee assignments and duties were also carried out including the supervision of repair and maintenance of the three cars assigned to the Nebraska Group. During the quarter, one of these (Ford) was turned back to the University.

AGRICULTURAL EXTENSION

Professor Duane E. Loewenstein

QUARTERLY REPORT

October 16 - December 31, 1966

Arrival and Orientation

I arrived for duty at Ataturk University on October 16. Job orientation was facilitated through conferences with the Nebraska Group Chief and Advisors, Doçent Doctor Ali Iştar, and Dean Abdussalam Ergene. Adequate office space was assigned and pertinent files relating to the work previously conducted were made available and thoroughly examined.

Extension Work

Considerable time was spent locating and reading information relating to extension work at Ataturk University and the functioning of the Agricultural Extension Service under the Ministry of Agriculture.

Books, research findings, and reports were read in developing an understanding of village life and farming.

The Extension Program of Work for 1967 was discussed with Doçent Doctor Ali Iştar. Of special interest are plans for a series of radio programs scheduled to begin in early 1967. The Extension Committee composed of departmental representatives has not met this fall but will meet in early January, 1967.

The coordination of the 1967 Plans of Work for Home Economics Extension and Extension Training was assigned to me.

Several requests for programming assistance from the Erzurum Province Extension Director and village Peace Corps volunteers were fulfilled.

The AID/Ankara photographer was on duty here for one week to take pictures depicting staff member's extension, research, and teaching programs, University facilities, and points of interest in the city. Scheduling and coordination of his work was done which culminated in 190 pictures being taken. Slide sets are to be developed for use by AID, the University of Nebraska, and copies will be made for Ataturk University.

Teaching Assignment

The teaching of Ziraat 101, Extension Methods and Procedures, was assigned for each semester. The present course outline, although adequate, was updated and followed. After additional resources arrive, considerable revision of the course contents as well as improvements for classroom presentations will be made. Dr. Asst's Birsen Ipek and Neriman Gorgunay, Home Economics staff members, serve as interpreters, translators, and graders to the 58 students presently enrolled.

Research and Studies

One research proposal has been written and the questionnaire developed in cooperation with the Director of Extension and the senior member in Sociology. The purpose of this project is to determine village farmers' channels of communication, extent of innovativeness, and knowledge of and attitudes toward Ataturk University programs. The initial data gathering will be limited to village farmers who reside in Erzurum Province. The questionnaire will be pretested early in January, 1967.

Related Activities

Two trips out of Erzurum were experienced. One tour was made at the time Dr. Baker visited the Hınıs area.

Counsel and assistance was provided several Turkish staff members as they work toward their Doçent degrees.

With the Nebraska Group Chief Advisor, planning for the development of an audio-visual center was pursued.

The film library continues to fulfill a needed role. Through concerted planning and coordination of efforts, even greater use of the films is anticipated.

Eight Ziraat Faculty Professor's Council meetings and four Nebraska Group staff conferences were participated in since my arrival.

CHEMISTRY DEPARTMENT

Professor Amel L. Bresson

QUARTERLY REPORT

July 1 - September 30, 1966

This quarterly report takes in the very end of the 1965-1966 academic year. A report on grade results was given in the last quarterly report. With graduation coming up, a graduating committee was appointed with myself as chairman of the committee. The other members included Macit Ozhan, İhsan Aysan, Zakir Kantarcioglu, Fethi Basar, Aslan Aksu, and Terfik Tarkan.

Plans were discussed and arrangements were made to hold the exercises in the large auditorium (the Turtle). It was then found that some of the senior graduating class would not graduate because of too low averages. Supposedly, the rest of the graduating class then went on strike to boycott the graduating exercises. The executive committee met and voted to lower this overall average by one-half point (to 5.5). This was still not enough, so the graduating class still stayed on boycott. This allowed the Rector to step in and cancel all graduating exercises. Those graduating just received their diplomas over the executive counter.

An inventory of the chemistry equipment was taken.

A list of apparatus and chemicals was prepared, especially for Organic Chemistry, and checked against existing supplies. This was translated into Turkish and it is now ready for the fall order.

Dr. Gulshan Akder, who returned in May from Stuttgart University with a Ph. D. in Organic Chemistry, will take over the Organic Division of the Chemistry Department for the coming academic year.

The General Chemistry will be divided this year into two sections. Section A will handle only the soils and animal science students while Section B will take care of the other three sections. This will allow us to give Section A the necessary training on the use of the slide rule which will be so very useful for their advanced courses in Chemistry. The other three sections who terminate their chemistry training with Kimya II will not need the slide rule training.

No make-up exams were given at the end of the 1965-1966 academic year. If any are given, they will be in October just before the beginning of the new academic year. However, all attempts will be made to give no make-up exams this year at all, thus pre-enforcing the new Chemistry Prerequisite Ruling which goes into effect this year.

Two of the three chemistry assistants have reported for duty, Huseyin Avcibasi on August 1 and Tahsin Uyar on September 1. They are adjusting to new surroundings, and apartments at the University have been applied for. Mehmet Yildaz Coskun has not as yet reported for duty. Huseyin Avcibasi has been given permission to make out and administer the Chemistry exams for the Erzurum Lysee. This meets with the approval of the Rector and the Administrative Council.

A trip to Ankara was made on August 21 to visit METU and to persuade the Chemistry Division there to release one English-speaking assistant to act as coordinator for the Chemistry Department here. That assistant could very well go ahead with his or her research right here in Erzurum so that no time would be lost. Dr. Mehmet Aydin, now doing research in Physics at METU, showed me around and I had talks with Dr. Bahattin Baysal, Head of the Department, and Dr. Ertugrul Onat. They assured me that all attempts would be made to encourage one assistant to apply for duty here. However, the need for assistants there is so great that it might not be possible to release any at this time.

Two trips to Hacettepe were made to gain their aid, as well as that of METU. Dr. Pinar Ozand and other members of the Chemistry staff assured me that they would also make all attempts to locate an English-speaking assistant.

Dr. Aydin and I started checking the sources of slide rules at Barkalp and Akba Evis and we found few, let alone cheap, slide rules in wood or plastic and these at 30 T.L. More contacts will be made by Dr. Aydin. I arrived in Erzurum on August 26. The trip was, to me, very successful

On September 26, I received a notice to chair the committee for the Opening Ceremonies of the University for the 1966-1967 academic year. The committee members are: Dr. A. L. Bresson, Chairman; Haluk Ipek, Ihsan Aysan, H. Rohin Unal, and Feti Cakit. The committee met three times and all arrangements for the ceremonies were made and the place determined. Since no graduation exercises were held at the end of the last academic year, my suggestions that a full ceremony be held (with caps and gowns) in the large auditorium (the Turtle) were enthusiastically accepted. In this way, the next graduating committee will have a good idea of how the next graduating exercises will function.

QUARTERLY REPORT October 1 - December 31, 1966

This report represents the beginning of my second year at Ataturk University. And so, October represented the preparation for opening exercises, the preparation and administering of make-up exams, and the

completion of assignments to the members of the Chemistry staff.

Ataturk University started its 1966-1967 academic year by the opening of school on October 10, 1966. I served as Chairman of the Opening Exercises Committee along with the staff members, Haluk Ipek, Khsan Aysan, H. Rohin Unal, and Feti Cakit. The plans for these opening exercises were carried out very well. The front wall of the auditorium (the Turtle) was raised to a height of about seven feet, the speaker's rostrum was moved back about ten feet into the adjoining hallway, and the first two rows of chairs behind the speaker's rostrum were reserved for robed professors and docents who marched in from the adjoining robing room. Other faculty members sat behind the robed professors and docents, while eight rows of extra chairs were made available for prominent personnel in front of the speaker's rostrum. Docent Dr. Macit Ozhan acted as Master of Ceremonies. Recvov Osman Okyar delivered the address at the opening exercises. This proved to be a very good place for the opening exercises. However, it was proved that, for future events, the long hall-entrance and side-entrance should be walled off with curtains to prevent and control outside hallway noises.

Make-up examinations were made out about October 1, and on October 5 and 6, administered to 38 Chemistry I, 42 Chemistry II, and 19 Chemistry 51 (Organic) students. In round figures, about half of each of the groups again failed showing the need of repeating the Chemistry courses. This also shows the advantages and need for the Chemistry Prerequisite System now established.

Although the registration of students took place right after the Opening Ceremonies, many students registered late, some as late as November 10th. Not only do these students lose out on a great deal of lecturing but they missed the first series of examinations thus necessitating make-up examinations at a later date. The percentage of failures so far this year is extremely high, and there is an almost definite assurance that the 43 students who did register late will fail enmass. In addition, 17 students who failed Chemistry II this last spring and were allowed to register for Chemistry 51 (Organic) had to be released from the Organic class. According to the Chemistry Prerequisite System, these students were admitted to Organic through the advisors. From now on, it seems that it will be necessary to place all grades in the hands of the advisors to be sure that such mistakes are not made again. However, all 17 students accepted the regulation without discord.

Registration of the Chemistry students found the following numbers in each division and course:

<u>Course</u>	<u>Field</u>	<u>Beginning Registrants</u>	<u>Repeats</u>
Chemistry I	Agr. Economics	41	2
Chemistry I	Plant Science	42	3
Chemistry I	Soils	38	3

<u>Course</u>	<u>Field</u>	<u>Beginning Registrants</u>	<u>Repeats</u>
Chemistry I	Animal Science	44	3
Chemistry I	General Agr.	37	5
		<u>202</u>	<u>16</u>
		equals 218.	
Chemistry 51 (Organic)		46	18

The class lectures were given by Asst. Orhan Yavus and supervised by me. The lectures were attended by the three assistants, Huseyin Avcibasi, Tahsin Uyar, and Mehmet Yildaz Coskun, to increase their teaching ability and the labs are being completely conducted by them. Asst. Rifat Danisman is handling the Organic course.

The above three assistants have fit into the Chemistry program very well. In addition to these duties, they are taking some 16 hours of English a week in preparation for foreign study. Asst. Rifat Danisman is also taking English as well as completing the work for his doctorate program.

I have been asked to take over the complete Fellowship Program including the Undergraduate Summer Work Program. In taking over this project, it became necessary to make a trip to Ankara from December 2-10. Contact with the following Fellowship Programs was made:

1. Secretary General of the Fulbright Committee, Husnu Ersoy. Besides working out the difficulties given Ercan Guneyli, the No. 1 1966 Fulbright Fellow, plans are now being formulated to give all future Fulbright Examinations at Ataturk University under the supervision of Mr. Ersoy and myself.
2. Field Research.
3. Ford Foundation.
4. Turkish Scientific & Technical Research Foundation.
5. NATO Grants administered by No. 4.
6. The International Assn. for Exchange Students for Technical Experience.

To give a report on these at this time would not only take a great amount of time and space but the information might not be complete at this time. Thus, a more complete report will be given within the next 3 to 6 months as data is collected and plans are formulated.

While in Ankara, visits to Ankara University Science Division and

METU were made and talks with Dr. Mehmet Aydin were held. Considering the possibility of a Docent rank being obtained at METU, I even now consider it wise to let the researcher stay at METU until October of 1967. At that time, that person will be qualified to take over the duties of Math and Physics and all parties concerned would benefit.

It may be reported at this time that the road at the farm families' lodging has been completed. The Turkish 3rd Army completed the raising of the level of the road and the grading, and have completely graveled the entire road. Our thanks to the Turkish Army.

The research work at Taze Gul finally was turned over to the Soils and Plant Science Divisions. Seventy (70) kilos of Eskisehir 305 winter-hardy wheat was delivered to the village. The fertilizers were spread by the village people under the supervision of the above division staff members. Regardless of who does the follow-up on this project, it is certainly worthwhile to give these village people an idea of how much fertilizer to add for increased yields and to compare this new wheat against their own.

PLANT SCIENCE DEPARTMENT

Professor James G. Ross

QUARTERLY REPORT

July 1 - September 30, 1966

The various tests of spring cereals grown in mid-west America and procured before leaving South Dakota were planted at Erzurum under irrigation. Notes were taken on the individual varieties during the growing season. The tests planted for observation consisted of the following: The Uniform Regional Spring Wheat Nursery (31 varieties); Advanced Spring Wheat Nursery (46 varieties); Spring Durum Nursery (19 varieties); and 98 accessions from the World Barley Collection. In yield tests, the center rows of three-row plots were harvested and threshed in a Vogel plot thresher built in Turkey at Eskişehir. Four replicates of 12 varieties of barley and 31 varieties of oats, and three replicates of 12 varieties of wheat were harvested for yield. Each plot has been split and one-half fertilized with nitrogen and phosphorous at near optimum rates. The other half was left as a control. Yields for only the wheat have at present been computed. An increased yield resulted from fertilizations, but because of unevenness of irrigation and soil fertility differences due to previous experimental work, these differences were not significant. In order for fertilizer application to be effective in raising yields, other limiting factors also must be eliminated. Other soil nutrients, especially minor elements, should be investigated.

The highest yielding variety of wheat was a Turkish village variety from Parmaksiz. An interaction between variety and fertilizer application was not found since yields were not increased to the degree that would be expected.

Similar results will be expected from the other cereal tests which have not yet been analyzed.

From the observations made this season, it may be concluded that spring grains do not have a high potential for this area. Winter wheat yields under irrigation were very much higher. Warrior with a yield of 75 bushels per acre, a Nebraska variety, yielded more than any other variety of winter wheat. The highest yielding spring variety only yielded 22 bushels per acre.

Therefore, the major effort should be directed towards breeding and determining production practices for high yield in winter grains. Ample winter hardiness is available in wheat, a degree of winter hardiness in winter barley and very little in oats. A breeding program to increase winter hardiness of barley should be initiated. In a recent visit to the Plant Breeding Station at Eskişehir, the most winter-hardy

lines of wheat and barley were procured to test under Erzurum conditions.

Preparations for seeding winter wheat tests prepared by Dr. Pfeiffer, a Fulbright Fellow arriving January 1, 1967, are underway. These represent a spectrum of the best breeding material available in the United States. Varieties obtained from various eastern European countries will also be placed under test.

Tests of eleven varieties of sorghum and four of soybeans which are adapted to South Dakota conditions are underway. The maturity range of these warm-season crops give them potential usefulness in this area. Likewise, varieties of field corn adapted to these conditions are under trial and appear to match the maturity and temperature situation in the Ataturk University region.

An acute, minor-element deficiency was noted under irrigated conditions especially on beans and sweet corn. Applications of zinc sulfate and iron sulfate on soybeans and zinc sulfate on field beans and on both sweet corn and field corn were made. An immediate remedial effect was noted on field beans and on field corn. Yield data will be obtained from these experiments. On the basis of preliminary observations, it is proposed that zinc sulfate application at 15-20 pounds per acre be made to all irrigated land.

Procurement of small-plot equipment is necessary in order to expedite the cereal breeding and production program. Dr. Pfeiffer of Pennsylvania State University is cooperating in this objective. He has offered to fabricate special equipment at his station and have it shipped to this station at its completion. Where possible, plot equipment available in Turkey will be obtained.

QUARTERLY REPORT October 1 - December 31, 1966

A graduate course in Cytology and Cytogenetics for assistants in various departments dealing with biology is being taught in the fall semester. The lectures are being supplemented with some laboratory work. The attendance at these lectures averages 10-12 students and represents the initiation of graduate teaching but without formal recognition of the course for credit.

Counseling on research problems with staff members and assistants is made on an informal basis.

Evaluation of crop plant varieties imported from America was made in field trials last summer. Analysis of the data obtained indicated that American varieties from the northern mid-west have potential in the

Erzurum area. The high yields, obtained under conditions where adapted genotypes have been used in conjunction with more optimum conditions, indicate that the farmers in the area are far from realizing potential yields. Under plot conditions, the top yields were as follows: corn (Michigan 202 hybrid), 108 bu. per acre; winter wheat (Warrior), 75 bu. per acre; soybeans (Lincoln), 22 bu. per acre; spring barley (Otis), 58 bu. per acre; spring oats (Russel), 69 bu. per acre; potatoes (Kennebec), 800 bu. per acre; and sugar beets, 4.6 tons per decare. Most of these yields in most instances, however, do not represent anywhere near the potential that is possible under optimum conditions.

Where irrigation was applied more frequently, the effects of fertilizer were more marked. A significant effect of fertilizer on yield of oats was obtained, but in other experiments, soil and irrigation variability made effects nonsignificant.

On the basis of this year's results, the greatest potential for yield appears to be in the winter cereal crops. Sufficient winter hardiness is present in wheat adapted to this region, but this does not appear to be so in barley or in oats. Apparently winter-hardy strains of wheat and also of barley have been obtained from the Eskisehir Plant Breeding Station for testing under Erzurum conditions. In addition, the world winter barley collection from Beltsville has been planted this fall for observation this winter.

A mineral nutrition deficiency on beans and corn was noted under irrigation conditions. Application of zinc sulfate in solution to field bean plants increased seed yield per plant from 16.8 grams to 29.3 grams. Dry zinc sulfate applied to the soil around the plants increased yields only from 17.6 grams to 21.2 grams. Difference in the first instance was significant at the 5% point and in the second at the 2% point. Zinc applied in solution to the first replicates of both sweet corn and field corn trials did not appreciably increase yields. This may have been a result of the worst replicate being selected for treatment. The deficiency symptoms had disappeared quickly after zinc application. A more comprehensive experiment involving pH modification and organic matter addition in conjunction with zinc application has been put in project form and initiated last fall. The responsibility for this project is being assumed by Dr. Nazmi Oruç of the Soils Department. Dr. Oruç also collaborated in the previously reported experiments.

A cultural project is being planned involving production factors for cereal crops with variables including improved summerfallow methods, fertilizer applications, cultural implements, times of seeding, irrigation procedures, etc. This will involve different departments, such as Soils, Agricultural Engineering, Agricultural Economics, and Plant Science. Plant breeding programs designed to increase straw strength of well-adapted, native wheat varieties are also being planned.

The purchase of small-plot experimental machinery has been

investigated both in Europe and America. In conjunction with Dr. Pfeiffer, Fulbright Professor at Ataturk University in 1967, orders for small-plot seeding and processing machinery have been placed. Professor Paul Carson at South Dakota State University is building equipment for measuring fertilizer response. This will be a part of the plot machinery designed to explore production capacity of various cereal genotypes under their optimum cultural conditions. Dr. F. Tosun, in Plant Science, and Inayet Berkman, in Soils, have cooperated in determining needs and deciding upon necessary machinery.

Cereal materials for testing in 1967-68 have recently been received from Yugoslavia and Hungary. These represent, in part, varieties grown in adjacent regions in Russia and the Caucasus region.

Contacts with farmers in villages in the vicinity have been made in order to determine the problems in production they encounter. For the most part, these are in culture and efficient use of irrigation water and fertilizer. Better varieties will be necessary as production methods improve. In conjunction with Dr. Nazmi Oruç of the Soils Department, a fertilizer demonstration involving two varieties of wheat and four fertilizer treatments on dry land has been established in a neighboring village.

APPENDIX

A monograph by Leo J. Fenske.

Kabataş: A Mountain Village in Erzincan Province

Leo J. Fenske¹

Introduction

A study was undertaken by the Ataturk University Agricultural Economics Department to determine the economic and social position of villagers in a relatively remote mountainous area in Eastern Turkey.² Kemaliye County in Erzincan Province was selected for study.

Kemaliye County lies in a rugged and mountainous area southwest of Erzincan. Actually the people of this county have easier access by road to Elazığ than to Erzincan. The Fırat River bisects the county running from northwest to southeast. In general, the land is steep and erosion is a major problem.

The farms are small and parcelated. The 120 farms in the study averaged 18.6 dönüm* per farm. Cereals, feed crops, vine crops, fruit, and nuts are produced. In general, the crop yields are low. Livestock production is an important part of the economy, because about 90 percent of the area is devoted to pastures.

The income from farming is low. The previously mentioned study showed 3,322 T.L. average annual value of gross product per farm in 1963. The small size of farm and low productivity of labor are contributing factors to this low income. For example, only 44 percent of the available work days were used in farm production.

Farmers have been leaving the area for employment elsewhere, especially since 1950. A disparity between men and women exists in Kemaliye County. The 1960 census showed 43 percent men and 57 percent women in all age groups.³ This situation creates social problems. It was decided to analyze this problem in one village. Kabataş village was selected as the sample village.

¹ Professor Agricultural Economics, Ataturk University.

² Sefkati Gülten, "The Economic Position of Small Farms in Kemaliye County, Erzincan Province", Unpublished doctoral thesis, 1964.

Acknowledgements: Appreciation is expressed to Dr. Asst. Sefkati Gülten and to the villagers of Kabataş for their cooperation and kind hospitality.

³ Publication No. 444, Census of Population, October 23, 1960, State Institute of Statistics, Ankara, 1963.

* 4.39 dönüm = 1 acre.

Kabataş Village

Kabataş village lies about 13 kilometers northeast of Kemaliye, the county seat. However, by road, the distance is much greater. A jeep road runs from Kemaliye about half way to the village and the balance of the way is only a horseback trail.

Beyond Şerefin Taş, the scenery is unsurpassed, being rough and mountainous. In places, the trail clings to the side of the mountain, and at other places, the trail dips to the valley floor of a rushing mountain stream. The gardens and fields of Çaldere village lie astride the trail just before reaching Kabataş village holdings.

The village is located on the southeast slope of Ayi peak, a barren, rocky point. To the northeast is Köselik Mountain and to the east and southeast are the rugged Munzer mountains. Directly across the valley to the south is Til Tepi, a relatively low point, almost surrounded by farm lands.

The farm lands of the village lie to the north and south of Til Tepi and extend southwest to the Çaldere holdings. The farm lands total about 2,000 dönüm, and pasture lands, 12,000 dönüm. About 900 parcels of land were reported.

Buildings

There are 86 houses in Kabataş village. In 1964, 66 were occupied and 20 were empty. The houses are built on the slope and have entrances at two levels. Usually the lower floor is the barn for animals and the upper floor, the family dwelling area.

Most of the homes are built of stone. The upper-story front is faced with boards, running up and down. The bottom of the boards are scalloped for a decorative effect. A few of the houses are large and pretentious, but the majority are of medium size.

The village has a mosque and a school but no stores or shops. The village also has a village room.

People

The population of Kabataş village has declined from 1945 (Figure 1). The village numbered 547 in 1945 and 296 in 1960 according to the official census figures. The survey in 1963 showed 233 inhabitants. The greatest reduction in population has occurred in the last 15 years.

Another characteristic noted was the disparity between men and women. In 1963, the village numbered 90 men and 143 women, or about 40

percent and 60 percent, respectively.

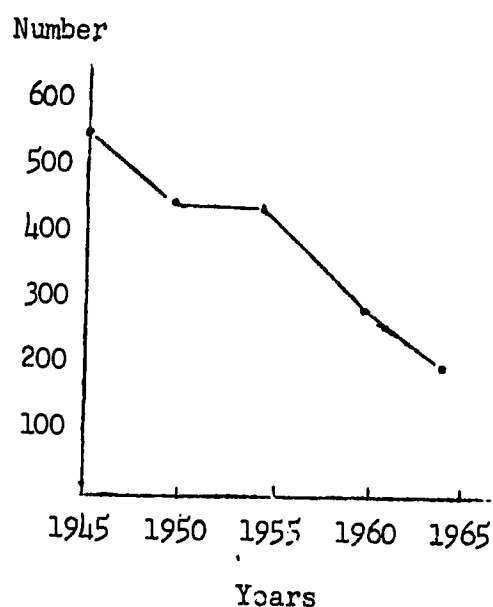


Figure 1. Population, Kabataş Village, Selected Years

The greatest differences were in the working age groups, 15 to 64 years (Figure 2). In many families, the men are away working in Istanbul and elsewhere, and the women and children are in the village.

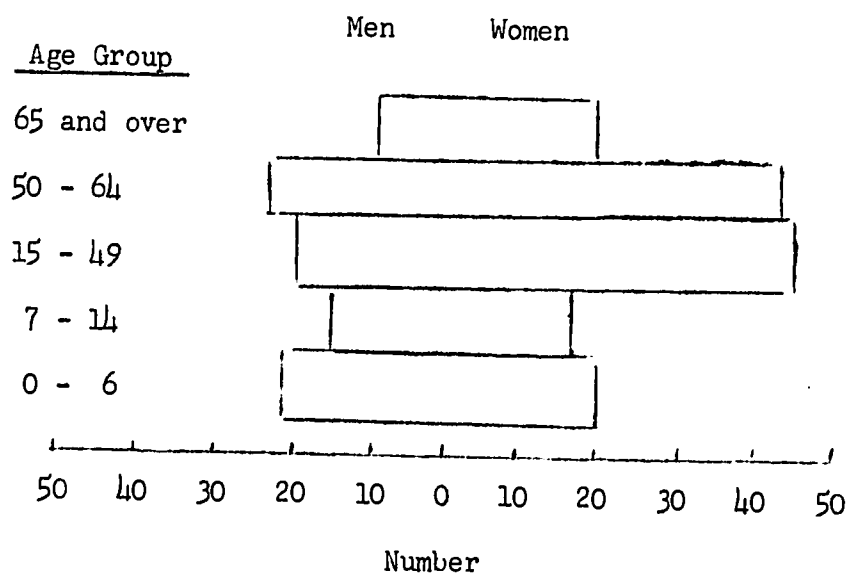


Figure 2. Age and Sex Distribution of People in Kabataş Village, 1963.

Education and Social Life

Kabataş has a first school with one teacher. The enrollment in 1962-63 was 17 girls and 16 boys. This equality between the sexes is somewhat unusual, because in Eastern Turkey, village school boys usually far outnumber the girls. Five grades are taught.

There were 12 radios in the village. Telephones and electricity were not available. Communications with the outside world must be made on foot or horseback. A cart road does not even exist.

Social life consists of visiting between families and celebrating on wedding and feast days. There are no opportunities for social development other than what can be generated within the village.

Migrations From the Village

Thirty families in the village were interviewed in detail on family members working away from the village. Of this number, 25 families reported one or more members away on outside jobs.

Table 1 shows some of the characteristics of this group.

Table 1. Characteristics of off-farm workers, 25 Kabataş village families.

Item and description	Number
Families involved	25
Workers involved	44
Average years away from village	11
Average age when leaving village	23
Workers with wife and children in village	14
Workers with wife and children along	30
Place of work:	
Istanbul	34
Ankara	9
Erzurum	1
Kind of work:	
Butchers	18
Wood and coal sellers	15
Porters	3
Electricians	2
Garage workers	2
Other jobs	4

Many of the workers reported as working away are actual residents now of their place of work. However, because of close family ties, the father remaining in the village reported these persons as family members. The general pattern is for the sons to leave the village for Istanbul or Ankara when in their early twenties. After marriage and in a few years, they then bring their families to the city. On the other hand, 14 workers still had their wives and children in the village. Four of these were heads of families who have worked for many years in the city but still leave their wives in Kabataş.

The majority of the workers were employed in Istanbul, 34 in all. Nine were in Ankara and one in Erzurum.

Eighteen of the 44 workers were employed as butchers and 15 as fuel sellers. The others were in scattered occupations. Kemaliye is noted as a supplier of men in the butcher trade.

Reasons for leaving

The primary reason for leaving the village is an economic one. In most instances, those interviewed pointed out that life in the village was difficult, and that they could earn a better living when working outside.

Implications

Divided families always bring about certain social problems. When family heads are missing, the burden upon the wife for maintaining family discipline becomes heavier. A normal family life is not possible under such circumstances.

It was noted that, in the younger families where the husband was away, the wife was somewhat unhappy. In many instances, they expressed the feeling that they must soon follow their husbands to the city. The other alternative was to have the husband return to the village, but they also felt that village life was too difficult to encourage this.

In the older families, the parents expressed a lonesomeness for their sons and families who had migrated to the city. Very few of the older people wanted to leave the village. They, too, expressed the idea that village work was too difficult and that they did not expect their sons to return.

Many of those that work away return to the village during vacation periods and periods of unemployment. These visits often occur in summer and the returned worker aids with the farm work. However, the main burden of farm work falls upon the women and children, also upon the older people remaining in the village.

Considerable idle farmland was observed in Kabataş village. The dearth of male workers was the main cause of this. In other cases, the father was too old to farm very heavily. One elderly man⁴ was visited when he was plowing a rocky field. He said, "I have raised seven sons, but look at me now. I must still plow the fields because they have gone to the city."

As a result of the migrations, some 20 houses are now empty. Although some of them were still in good condition, many were deteriorating from lack of use. Actually the village was regressing rather than progressing as a community.

On the positive side, the families with off-farm workers were in a better economic position than those entirely dependent upon farming. The economic gains from off-farm work more than offset the losses from lowered farm incomes and the hardship of a divided family life. It is almost certain that the migrations will continue. There is little reason to believe that a reversal will take place.

Village Economy

The economy of the village is based on agriculture, including both crop and livestock production. The economy is largely one of subsistence because very few products find outside markets.

There were 66 farm operators in the village. All were owner-operators, and no renting of land was reported. The farms are small and were distributed as follows:

1 - 10 donum	30 farms
11 - 20 donum	22 farms
21 - 50 donum	14 farms
50 donum and over	None

Land use and crop production

Table 2 shows the major uses of farm land in 1963.

As shown in Table 2, most of the irrigated land was in use, but a large part of the dryland was idle. Roughly one-half of the total cropland area was idle in 1963.

Table 3 shows the crops grown and production for 1963.

Approximately 80 percent of the area in crops was devoted to

⁴This man was not included in the 30 sample-families.

Table 2. Land use in Kabataş village, 1963.

	Irrigated	Dry	Total
	(Dö)	(Dö)	(Dö)
Fields:			
Seeded	620	80	700
Fallow	100	120	220
Idle	<u>50</u>	<u>950</u>	<u>1,000</u>
Total	770	1,150	1,920
Gardens	80	---	80
Pastures	<u>60</u>	<u>---</u>	<u>60</u>
Total	910	1,150	2,060

Table 3. Crops grown, yields per dönüm and total production, Kabataş village, 1963.

Crop	Dönüm	Dö./Kg.	Total production, kilograms
Wheat - dry	50	60	3,000
Wheat - irr.	300	100	30,000
Barley - dry	30	50	1,500
Barley - irr.	5	120	600
Rye - irr.	180	160	28,800
Dry beans - irr.	40	80	3,200
Potatoes - irr.	27	2,000	54,000
Squash - irr.	3	1,500	4,500
Onions - irr.	10	800	8,000
Alfalfa - irr.	30	500	15,000
Sanfoin - irr.	5	375	1,875
Cow vetch - irr.	<u>20</u>	<u>250</u>	<u>5,000</u>
Total	700	xxx	xxx

cereals. Wheat ranked first and rye, second, in order of importance. In general, the crop yields were low.

The village has some possibilities for fruit production. About 62 dönüm of land was devoted to fruit, willow, and popple trees. Table 4 shows the extent of fruit growing in the village.

Table 4. Fruit, willow, and popple trees, area and number of trees, Kabataş village, 1963.

Kind of tree	Dönüm	No. trees	Total production, kilograms
Apple	2.3	150	1,000
Pear	20.0	1,000	18,000
Quince	0.5	10	---
Almond	0.5	2	---
Walnut	2.5	5	100
Mulberry	3.0	20	400
Plum	2.0	200	500
Wild Olive	2.0	200	---
Cherry	0.7	15	75
Wild apricot	0.5	50	---
Willow	9.0	1,800	500*
Popple	18.5	5,500	600*
Total	61.5	8,952	xxx

* Number of trees cut.

Pears were the main fruit produced. All others were of minor importance. In addition to the wood producing trees within the village, the village owned 7,000 dönüm of forest land in the mountains.

Cultural Practices

All the farming in the village is done with oxen and, also, much hand work is involved. Transportation of products from the fields to the village was on the backs of mules or donkeys. There were no ox carts or wagons in the village.

Table 5 shows the field operations carried out in the village.

The village has a fairly good supply of irrigation water from springs, creeks, and run-off. However, the irrigation system is very primitive and full utilization of the water is lacking. As noted in

Table 2 (page 43), most of the land now being farmed is classified as irrigated land.

Table 5. Field operations in Kabataş village, times over.

Crop	Soil preparation	Irrigation	Fertilizing*	Hoeing	Harvesting
Cereals	3	1 - 3	1	-	1
Beans	3	4 - 5	1	2	1
Vetch	1	4 - 5	1	-	1
Onions	3	4	1	2	1
Potatoes	3	4	1	2	1
Squash	3	3	1	2	1
Alfalfa	3	5	1	-	2
Sanfoin	3	5	1	-	1

* Very little fertilizing was practiced.

Table 6 indicates the reported rates of seeding, also the usual planting and harvesting dates for the village.

Table 6. Rates of seeding and dates of seeding and harvesting for various crops grown in Kabataş village.

Crop	Seed: Dö./Kg.		Dates seeding		Dates harvesting	
	Dry	Irr.				
Wheat, winter	15	20	Aug. 15-Sept. 30	July 15-Aug. 15		
Wheat, spring	15	20	Apr. 1-May 30	Aug. 15-Sept. 15		
Barley	10	15	Apr. 1-May 20	Aug. 15-Sept. 15		
Rye	20	25	Apr. 1-May 20	Aug. 15-Sept. 15		
Dry beans	--	10-15	May 15-May 30	Sept. 15-Sept. 30		
Potatoes	--	150	Apr. 1-May 15	Sept. 15-Sept. 30		
Squash	--	0.5	May 15-May 30	Sept. 15-Sept. 30		
Onions	--	40	May 1-May 15	Sept. 15-Sept. 30		
Alfalfa	--	5	May 15-May 30	(1) May 30-June 15		
Cow vetch	--	15-30	Apr. 1-May 20	(2) June 30-July 15		
				July 1-July 15		

Animal Husbandry

The livestock sector is an important part of the village economy.

The pastures are fairly large in size, and native grasses and legumes thrive on them. Thus, natural conditions dictate livestock raising.

The villagers owned 256 big-head animals and 1,856 small-head animals in 1963, also 420 poultry. Table 7 shows the livestock numbers for 1963.

Table 7. Livestock numbers in Kabataş village, 1963.

Big-head	Number	Small-head	Number
Horses	8	Sheep (Male)	78
Mules	28	Sheep (Female)	630
Donkeys	61	Lambs	250
Oxen	40	Goats (Male)	46
Cows	80	Goats (Female)	552
Heifers	15	Kids	300
Calves	20	Total small-head	1,856
Bulls	4		
Total big-head	256	Chickens	420

The animals furnish transportation, power, food products, and fuel in the form of tezek, and at the same time, they utilize land which would otherwise be wasteland. Production is mainly for home use.

The village practices a rotational grazing system, starting first in the Çaldağı place about April 1. Later the flocks are moved to Gulaç, Argavut, and Karadağ places. As the season progresses, they move to the higher places. From about June 1 to the end of October, the cattle and sheep are continuously outside and are not brought to the village at night.

In addition to the local flocks, some nomad tribes from the Erzincan villages bring their animals for pasturing on a rental basis. At times, conflicts arise because of this situation.

The animals are in the barn from about November 1 until April 1 or so, usually a five to six month period. The main forage is straw supplemented with native grass and legume hays. The farmers have difficulty in gathering enough feed to properly winter their animals.

Marketing

Very few farm products enter market channels. The production is meager and is practically all used for family subsistence. No truck road

reaches the village, therefore, all products going to the outside must be carried out on the backs of mules. This condition does not lend itself to a market economy.

Cereal production barely meets the villagers needs, thus, no cereals are sold. A few potatoes and fruits are sold to merchants in Kemaliye. Some cheese is sold to buyers who come to the village in the fall, likewise some hides and wool.

As a result of this, cash farm incomes are low. In general, cash is supplemented by working away or by relatives sending money to those that remain in the village.

Village Problems

Each of the thirty villagers interviewed in detail was asked to outline the main problems of the village. Invariably three problems were mentioned:

- (1) The lack of a road to the village.
- (2) Capital or money shortage.
- (3) Shortage of winter feed for animals.

The lack of a road definitely isolates the village especially during the winter months. This situation inhibits the villagers from producing for the market. A question in reference to the idle lands in the village brought forth replies such as the one listed below:

"What shall I do with more production when there is no market for our surplus products?"

A capital shortage exists because the farmers were working with very primitive tools and equipment. A shortage of cash also hinders the hiring of extra labor. However, most of the farmers interviewed stated that they did not desire more credit because they felt that, under present subsistence-farming conditions, extra credit would not help much.

The winter feeding problem exists because of the low productivity of the soil. The irrigation system in use is not adequate even though water is available. Therefore, yields are very low.

All three problems are somewhat tied together. The lack of markets dulls the incentive of the farmers to produce more. Low production results in little or no capital formation. Even though production credit could serve as a useful tool in increasing production, the farmers presently feel that the incentives are lacking to use credit to do so.

Many villagers mentioned that former residents now working in Istanbul have formed an association to aid Kabataş village. This could prove to be a very helpful group.

Conclusions

Kabataş village is quite representative of many villages in this particular area. Other villages show the same depletion of population and present the same problems.

The movement of people from the village is not to be deplored, because it is a natural phenomena taking place the world over. If employment opportunities exist on the outside, the opportunity cost of remaining in farming becomes too great.

On the other hand, the villages of this type should not be abandoned entirely, because under a proper setting, the ones remaining in farming will have more land to work with. This adjustment in land consolidation has not as yet taken place in Kabataş. The old traditional barriers of land ownership continue, and those away would rather leave their land idle than rent it to others who remain.

In Kabataş, the "working away" concept has become traditional. In fact, several families have accepted the practice of having the husband and father away for the greater part of the time year after year. However, the younger men are beginning to make their move permanent by taking their families with them to the city.

It was observed that all former residents still maintained strong ties with the village. Most of them return to Kabataş on their vacations. Some families maintain their house there just for summer occupancy. All in all, this small village presents an interesting study in incomplete migration.